What Is Claimed Is:

1. A synthetic polymer and starch blend comprising:

1-30 wt.% starch;

1-24 wt.% a compatibilizer; and,

the remainder a polymer.

2. The blend of Claim 1 wherein said starch is granular starch.

3. The blend of Claim 1 wherein said starch is selected from the group consisting of cornstarch, wheat starch, rice starch, and potato starch.

4. The blend of Claim 1 wherein said compatibilizer is comprised of 75-98 wt.% polymer and 2-25 wt.% grafting compound, wherein said grafting compound is covalently attached to said polymer.

5. The blend of Claim 4 wherein said grafting compound is maleic anhydride.

6. The blend of Claim 4 wherein the polymer of the compatibilizer is selected from the group consisting of polyethylene, polypropylene, polystyrene, polybutylene, poly(styrene-ethylene-butylene-stryrene), poly(ethylene terephthalate), polyvinyl fluoride, polyvinyl chloride, or derivatives thereof.

7. The blend of Claim 4 wherein said grafting compound comprises 5 wt.% of said compatibilizer.

8. The blend of Claim 1 wherein said polymer is selected from the group consisting of polyethylene, polypropylene, polystyrene, polybutylene, poly(styrene-ethylene-butylene-stryrene), poly(ethylene terephthalate), polyvinyl fluoride, polyvinylchloride, or derivatives thereof.

9. The blend of Claim 1 wherein said polymer is polyethylene.

10. A method for synthesizing a synthetic polymer and starch blend, comprising mixing 1-30 wt.% granular starch with 1-24% compatibilizer and the remainder polymer; and,

reacting the mixture such that the compatibilizer and the granular starch become covalently bound.

11. The method of Claim 10 wherein said reacting comprises applying heat and pressure.

12. The method of Claim 10 wherein said compatibilizer comprises 1-20 wt.% grafting compound and 80-99 wt.% polymer.

13. The method of Claim 12 wherein said grafting compound is maleic anhydride.

14. The method of Claim 12 wherein said grafting compound comprises 5 wt.% of said compatibilizer.

15. The method of Claim 12 wherein the polymer of the compatibilizer is selected from the group consisting of polyethylene, polypropylene, polystyrene, polybutylene, poly(styrene-ethylene-butylene-stryrene), poly(ethylene terephthalate), polyvinyl fluoride, polyvinylchloride, or derivatives thereof.

16. The method of Claim 10 wherein said polymer is selected from the group consisting of polyethylene, polypropylene, polystyrene, polybutylene, poly(styrene-ethylene-butylene-stryrene), poly(ethylene terephthalate), polyvinyl fluoride, polyvinyl chloride or derivatives thereof.

17. A synthetic polyethylene and starch covalently bound mixture comprising:

5-30% of a granular starch selected from the group consisting of wheat starch, cornstarch, rice starch, potato starch or high amylose starch, wherein said starch is not gelatinized;

a polymer selected from the group consisting of polyethylene, polypropylene, or polyethylene derivatives;

a compatibilizer selected from the group consisting of maleic anhydride or chemicals having similar reactive properties;

wherein application of heat and pressure to the mixture produces covalent bonds between the compatibilizer and the starch;

wherein said compatibilizer is covalently bound to said polymer;

wherein said starch granules are 10-100 micrometers in diameter;

wherein said compatibilizer is attached to approximately 5% of individual monomer units;

wherein the resulting mixture is less expensive and more biodegradable than pure polyethylene and has similar mechanical properties; and,

wherein said mixture absorbs relatively little water.

18. The synthetic polymer and starch blend of claim 1 wherein the polymer is selected from the group consisting of polyethylene, polypropylene, polystyrene, polybutylene, poly(styrene-ethylene-butylene-stryrene), poly(ethylene terephthalate), polyvinyl fluoride, polyvinyl chloride or derivatives thereof and the compatibilizer is comprised of maleic anhydride grafted poly(styrene-ethylene-butylene-styrene).